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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/881,986	06/14/2001	Jerome R. Bellegarda	04860.P2657	7797

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BLAKELY SOKOLOFF TAYLOR & ZAFMAN  
12400 WILSHIRE BOULEVARD  
SEVENTH FLOOR  
LOS ANGELES, CA 90025-1030

EXAMINER

ZHONG, CHAD

ART UNIT	PAPER NUMBER
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2152

DATE MAILED: 06/17/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 09/881,986	Applicant(s) BELLEGARDA ET AL.	
	Examiner Chad Zhong	Art Unit 2154	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 12 January 2004.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-50 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-50 is/are rejected.
- 7) ☒ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>12/27/04</u> . | 6) <input type="checkbox"/> Other: _____  |

### FINAL ACTION

1. This action is responsive to communications: Amendment, filed on 03/24/2005. This action has been made final.

Claims 1-50 are presented for examination.

Claims 49-50 are newly added; Claims 1, 3, 13, 15, 25, 27, 37, 39 are amended.

Applicant's remarks filed 03/24/2005 have been considered but are found moot in view at the new grounds at rejection necessitated by Applicant's amendment.

### *Claim Rejections - 35 USC § 112*

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1, 13, 25, 37 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Claims 1, 13, 25, 37, discloses "comparing the vector correspond to the incoming message with at least one of the first semantic anchor and the second semantic anchor to obtain a first comparison value and a second comparison value". This section is not supported by the specification and is not enabling, the Examiner believes in order to get two comparison values one must make two separate comparisons in the first place. This is supported in Applicant's specification [0034-0035], where there are two comparison values resulting from two separate comparisons.

*Claim Rejections - 35 USC § 112, second paragraph*

2. Claims 1 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

a. The following terms lack antecedent basis:

i. the first and second groups - claim 1.

*Claim Rejections - 35 USC § 102*

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-8, 10-12, 13-20, 22-24, 25-32, 34-36, 37-44, 46-50 are rejected under 35 U.S.C. 102(b) as being anticipated by Foltz et al. (hereinafter Foltz), "Personalized Information Delivery: An analysis of Information Filtering Methods", ACM, 35(12), 51-60, 1992.

5. As per claim 1, Foltz teaches wherein a method for filtering messages comprising:

determining a first semantic anchor (the first and second semantic anchors are user provided word and document listings based on user's interest, this is found in pg 5, lines 20-35, these anchors exist in a large word-by-document matrix) corresponding to a first group of messages and a second semantic anchor corresponding to a second group of messages;

determining a vector corresponding to an incoming message (the messages are compared with the word document vectors in the matrix, see for example, pg 4, lines 1-20);

comparing the message corresponding to the incoming message with at least one of the first semantic anchor and the second semantic anchor (pg 6, lines 1-12) to obtain a first comparison value and a second

comparison value (the values that result from the comparison are used for ranking the document of interest, this is disclosed in pg 6, lines 30-37); and

filtering the incoming message through classifying the incoming message between the first and second groups based on the first comparison value and the second comparison value (the new Technical Memos are ranked in accordance with their relevance to the receiver of interest, see for example, pg 6, line 35-44).

6. As per claim 2, Foltz teaches a method as in claim 1, wherein said second group of messages are defined as unsolicited messages, and said first group of messages are defined to not be unsolicited messages (the unsolicited messages are messages of interest to the receiver, on pg 6, lines 38-44, only the most relevant Technical Memos are presented to the users).

7. As per claim 3, Foltz teaches a method as in claim 2, wherein the second semantic anchor and the first semantic anchor are vectors obtained respectively from previously received unsolicited messages of a training message corpus and previously received messages defined not to be unsolicited messages of the training message corpus (The semantic anchors or word document profiles are derived from a message corpus, wherein the corpus contains previously stored Technical Memos, see for example, pg 6, lines 13-25. Further, the word document profile is updated dynamically as more relevant Technical Memos are filtered out, see for example, pg 6, lines 38-44).

8. As per claim 4, Foltz teaches a method as in claim 3, wherein the training message corpus is used to obtain a matrix  $W$  comprising a word distribution factor (pg 6, lines 13-25, word distribution factor are weight values).

9. As per claim 5, Foltz teaches a method as in claim 4, wherein the matrix  $W$  is used to generate the first semantic anchor and the second semantic anchor using singular value decomposition (pg 4, lines 1-

14).

10. As per claim 6, Foltz teaches a method as in claim 1, wherein the first group of messages, the second group of messages and the incoming message comprise messages from at least one of email messages, email attachments, and computer programs (pg 5, lines 5-14).

11. As per claim 7, Foltz teaches a method as in claim 1, wherein determining a vector corresponding to an incoming message comprises using a singular value decomposition to generate the vector corresponding to the incoming message (pg 4, lines 5-24).

12. As per claim 8, Foltz teaches a method as in claim 1, wherein comparing the vector corresponding to the incoming message with at least one of the first semantic anchor and the second semantic anchor comprises determining an angle between the vector corresponding to the incoming message and at least one of the first semantic anchor and the second semantic anchor (see for example, pg 6, lines 26-37).

13. As per claim 10, Foltz teaches a method as in claim 1, wherein comparing the vector corresponding to the incoming message with at least one of the first semantic anchor and the second semantic anchor to obtain a first comparison value and a second comparison value comprises permitting a user to decide whether the incoming message is from the first group of messages or from the second group of messages when the first comparison value is substantially equal to the second comparison value (pg 7, lines 1-15).

14. As per claim 11, Foltz teaches a method as in claim 10, wherein filtering the incoming message based on the first comparison value and the second comparison value comprises at least one of automatically filtering the incoming messages, and tagging the incoming message (pg 6, lines 25-37).

15. As per claim 12, Foltz teaches a method as in claim 11, wherein tagging the incoming message comprises at least one of tagging the incoming message with a first tag for a message corresponding with the first group of messages, tagging the incoming message with a second tag for a message corresponding with the second group of messages, and tagging the incoming message with a third tag when the first comparison value is substantially equal to the second comparison value (pg 6, lines 25-37, wherein the tags or scores are given for the most relevant desired Technical Document, so the desired messages gets a higher score, undesired messages get a lower score, and substantially equal messages would get scores that are close to each other).
16. As per claims 13-20, 22-24, the claims are rejected for the same reasons as rejection to claims 1-8, 10-12 above respectively.
17. As per claims 25-32, 34-36, the claims are rejected for the same reasons as rejection to claims 1-8, 10-12 above respectively.
18. As per claims 37-44, 46-48, the claims are rejected for the same reasons as rejection to claims 1-8, 10-12 above respectively.
19. As per claim 49, Foltz teaches a method a method as in claim 3, wherein the second semantic anchor corresponds to a centroid of the previously received unsolicited messages of a training message corpus in the semantic vector space; and the first semantic anchor corresponds to a centroid of the previously received messages defined not to be unsolicited messages of the training message corpus in the semantic vector space (pg 6, lines 13-25, Note, the detailed information about centroid and the previously existing messages are also disclosed in Deerwester, refer to pg 6, 11, 15, and 21 for specific details).
20. As per claim 50, Foltz teaches a method as in claim 1, wherein each of the first and second

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semantic anchors representing a vector in a semantic vector space; and the vector corresponding to the incoming message is determined in the semantic vector space (pg 4, lines 1-25).

*Claim Rejections - 35 USC § 103*

21. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

22. Claims 9, 21, 33, 45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Foltz et al. (hereinafter Foltz), "Personalized Information Delivery: An analysis of Information Filtering Methods", ACM, 35(12), 51-60, 1992, in view of Deerwester et al. (hereinafter Deerwester), "Indexing by Latent Semantic Analysis", 1990.

23. As per claim 9, does not explicitly teach a method as in claim 1, wherein comparing the vector corresponding to the incoming message with at least one of the first semantic anchor and the second semantic anchor comprises comparing the length of a normal between the first semantic anchor and the vector corresponding to the incoming message, and the length of a normal between the second semantic anchor and the vector corresponding to the incoming message.

In a similar system Deerwester teaches detailed analysis of vector to matrix comparison using SVD, the length of a normal  $T_o$  and  $D_o$  are items that's being compared against the incoming messages see for example, pg 12, Fig 2.

It would have been obvious to the person ordinary skill in the art at the time of the invention to combine teachings of Foltz and Deerwester because Foltz uses SVD matrix and explicitly refers to Deerwester as a further teaching reference. Further, using Deerwester's SVD matrix would lead to comparing normals



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between the To and Do in the SVD matrix of Foltz and would result in returning of a comparison value that is used for returning most relevant document listing.

24. As per claims 21, 33, 45, claims 21, 33, 45 are rejected for the same reasons as rejection to claim 9 above.

### *Conclusion*

**THIS ACTION IS MADE FINAL.** Applicant is reined of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The following patents and publications are cited to further show the state of the art with respect to "METHOD AND APPARATUS FOR FILTERING EMAIL".

- |      |            |                |
|------|------------|----------------|
| i.   | US 6578025 | Pollack et al. |
| ii.  | US 6701305 | Holt et al.    |
| iii. | US 6192360 | Dumais et al.  |

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- iv. US 5987446 Corey et al.
- v. US 6816885 Vaithyanathan et al.
- vi. US 6718368 Ayyadurai
- vii. "strategies for filtering email messages combining content-based and sociological filtering with user stereotypes", Shoal et al. 1999
- viii. "ProntoMail Professional Edition", Alwang, Greg, May 1998
- ix. "Intelligent email management system", Tsai et al. 1999

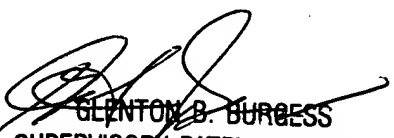
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chad Zhong whose telephone number is (571)272-3946. The examiner can normally be reached on M-F 7:15 to 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, BURGESS, GLENTON B can be reached on (571)272-3949. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained

from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

CZ  
June 10, 2005

  
GLENTON B. BURGESS  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2100  
6/13/05